

TWO NEW SPECIES OF *LACCOBIUS* FROM  
EASTERN NORTH AMERICA (COLEOPTERA: HYDROPHILIDAE)

Stanley E. Malcolm

*Abstract.*—*Laccobius reflexipenis* and *L. spangleri* are described from eastern North America. Holotypes and paratypes are designated. Male genitalia and pronotal maculation are figured. Distribution maps are included.

---

In "The Water Beetles of Maine" (Malcolm, 1971) I mentioned two species of *Laccobius* to be described by two other taxonomists, Brian S. Cheary and Ronald B. Willson. Because my paper included significant characters and appeared while those of Cheary and Willson were in press, I inadvertently became descriptor of the two species. In order to clarify this unfortunate situation, I include full descriptions of the two species and designate types. The publications of Cheary and Willson have not yet appeared.

The following standard abbreviations for collections are used: BMNH—British Museum (Natural History); CAS—California Academy of Sciences; CNC—Canadian National Collection; DCM—David C. Miller; FMNH—Field Museum of Natural History; SEM—Stanley E. Malcolm; UCR—University of California at Riverside; UM—University of Maine; USNM—U.S. National Museum of Natural History.

*Laccobius reflexipenis* n. sp., Malcolm

*Laccobius reflexipenis* "Cheary." Malcolm 1971. Univ. Maine Agri. Exp. Sta. Tech. Bull. 48:40-42.

*Holotype.* Male; Maine, E. Corinth, Penobscot Co. July 17, 1969, Stan Malcolm; USNM type number 71356.

Form oval; length 2.8 mm; width 1.7 mm; head with frequent medium sized punctures overlying a strongly microreticulate surface, color metallic bronze-green except a triangular pale area anterior to the eye; pronotum punctured and reticulate as head, disc metallic bronze-green, margins pale, (for pronotal spot pattern see Fig. 1a); scutellum metallic bronze-green; elytra pale, medium sized dark brown punctures arranged in imperfect series overlying moderately microreticulate surface, some puncture marks coalesced along suture at midpoint to form a dark spot, punctures at apices and margins only slightly darkened; ventral surface dark brown, covered with dense hydrofuge pubescence; coxae dark brown, trochanters and fem-

A →



B →



Fig. 1. Pronotal spot patterns: a. *Laccobius reflexipennis* Malcolm, b. *Laccobius spangleri* Malcolm.

ora brown except lighter at distal ends, tibiae and tarsi pale, forefemora with dense hydrofuge pubescence on proximal third; palpi and antennae pale except antennal club brown; aedeagus with median lobe filiform, bowed in lateral view; parameres with recurved extensions in ventral view, tips of parameres downcurved, rounded (Fig. 2a).

*Variation.* Length 2.4 to 3.4 mm, males average 2.6 mm, females 3.0 mm; metallic colored areas often bronze-red, sometimes brown; pale background coloration often darker, obscuring pronotal spot pattern and changing (often enhancing) elytral maculation. The great variation between individuals in coloration and size necessitates the use of male genitalia to distinguish *L. reflexipennis* from sympatric species.

*Specimens examined.* 323; Distribution is plotted on map 1. Paratypes bearing the cited locality data have been deposited in the following collections: 1 ♂, 1 ♀, Indiana, U.S.A., Starke Co., W. S. Blatchley Coll. (BMNH); 2 ♂, Mo. Ripley Co., Buffalo Creek at Route C, 5.5 mi N. of Briar, 5-VIII-1967, collector H. B. Leech (CAS); 1 ♂, Boiestown, N. B.,

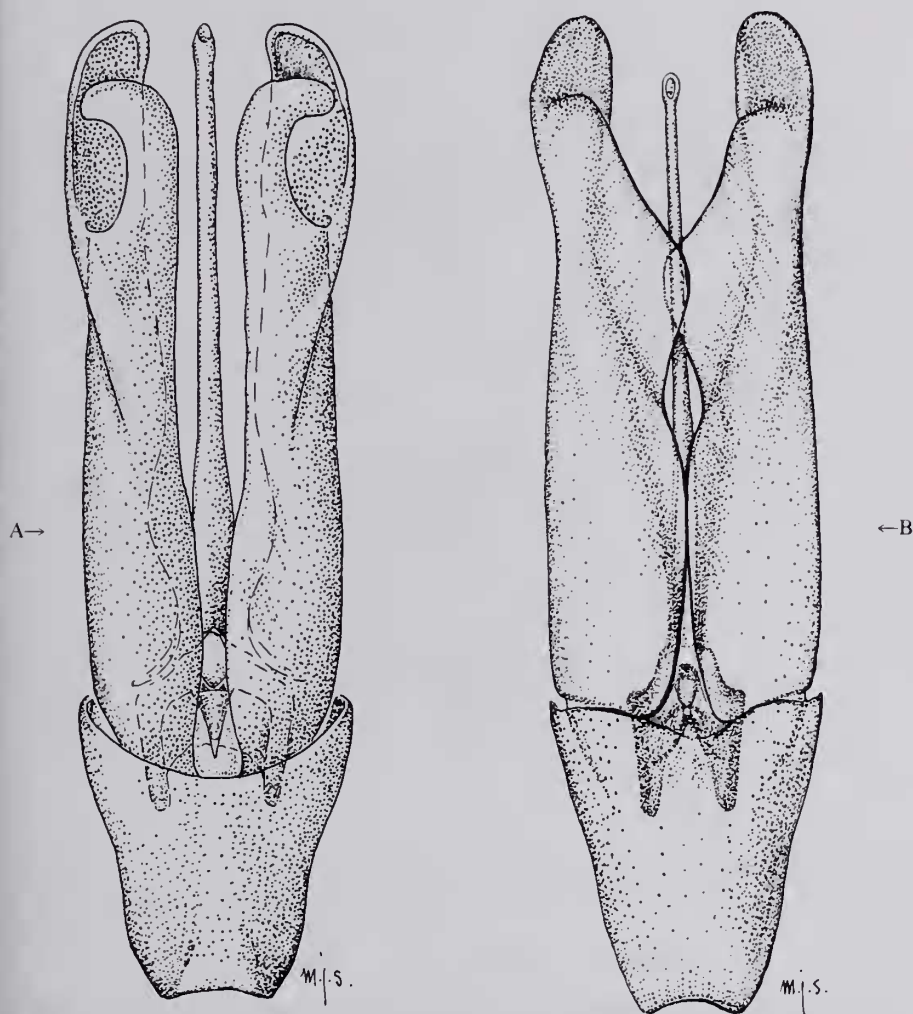


Fig. 2. Male genitalia, ventral view: a. *Laccobius reflexipenis* Malcolm, b. *Laccobius spangleri* Malcolm.

VII-11-1928, W. J. Brown, 1 ♂, Knowlton, Que., VI-26-1928, G. H. Fisk (CNC); 1 ♂, MAINE, Corinth, Penobscot Co., 8-13-1969, Stan Malcolm (DCM); 1 ♂, IOWA, Scott Co., Davenport, V-10-1964, leg. S. B. Peck (FMNH); 1 ♂, 1 ♀, E. of Beddington, ME, VIII-1-1970, Rt. 9, Stan Malcolm (SEM); 1 ♂, Indiana, U.S.A., Starke Co., W. S. Blatchley Coll. (UCR); 2 ♂, MO., 7 mi W. of Weldon Spgs., VI-25-1954, Paul Spangler, 1 ♂, 8 mi W. Steelville, MO. Meramec River, X-10-1953, M. C. Grabau (USNM).



Map 1. Distribution of *Laccobius reflexipennis* Malcolm.

*Laccobius spangleri* n. sp., Malcolm

*Laccobius spangleri* "Willson." Malcolm 1971. Univ. Maine Agri. Exp. Sta. Tech. Bull. 48:40-42.

*Holotype*. Male; Dixmont Ctr., Maine VII-20-1970, S. Malcolm; USNM type number 73365.

Form oval; length 2.5 mm; width 1.6 mm; head with frequent medium sized punctures overlying a strongly microreticulate surface, color metallic bronze-green except a triangular pale area anterior to the eyes; pronotum punctured and reticulate as head, disc metallic bronze-green, margins pale, (for pronotal spot pattern see Fig. 1b); scutellum metallic bronze-green; elytra pale, medium sized metallic bronze-green punctures arranged in im-



Map 2. Distribution of *Laccobius spangleri* Malcolm.

perfect series alternating with less regular rows of punctures overlying lightly microreticulate surface, some puncture marks coalesced along suture at midpoint to form a dark spot, other vague dark spots similarly formed distributed in a pattern typical of many *Laccobius* species, punctures at apices and margins with little darker marking; ventral surface and coxae dark brown, covered with dense hydrofuge pubescence; legs brown proximally, gradually lighter from mid-femora distally, forefemora with dense hydrofuge pubescence in basal third; palpi and antennae pale except antennal club brown; aedeagus with median lobe filiform, bowed in lateral view; parameres with overlapping semi-membranous extensions in ventral view, tips of parameres downcurved, rounded, concave below (Fig. 2b).

*Variation.* Length 2.3 to 3.2 mm, males average 2.6 mm, females 2.9 mm; metallic colored areas often bronze-red, sometimes brown; background coloration may be lighter or considerably darker than holotype, obscuring pronotal spot pattern and changing elytral maculation. As with the preceding species, the great variation between individuals in coloration and size necessitates the use of male genitalia to distinguish *L. spangleri* from sympatric species.

*Specimens examined.* 454; Distribution is plotted on map 2. Paratypes bearing the cited locality data have been deposited in the following collections: 1 ♂, 1 ♀, Indiana, U.S.A., Starke Co., W. S. Blatchley Coll. (BMNH); 1 ♂, 1 ♀, 7-VII-1946, Cornwall, CONN., Spring Brook, Chamberlain Collector (CAS); 1 ♂, 1 ♀, Ottawa, Ont., 15-V-1930, W. J. Brown (CNC); 1 ♂, 1 ♀, Dixmont Ctr., ME., VII-20-1970, S. Malcolm (DCM); 1 ♂, 1 ♀, MAINE, Oxbow, Aroostook Co., July 7, '69, Stan Malcolm (SEM); 1 ♂, Mohawk, MICH., Gratiot River, Keweenaw C., 7 July 1964, R. B. Willson, 1 ♂, Allendale, MICH., Ottawa Co., 17 July 1963, R. B. Willson (UCR); 2 ♂, MAINE, Harmony, Somerset Co., Aug. 3, 1969, Stan Malcolm (UM); 1 ♂, 1 ♀, 4 mi E. Levering, Emmet Co., Mich. 43b, VIII-5-1952, Paul J. Spangler (USNM).

For both species the male genitalia are diagnostic. Males can be recognized by their generally smaller size and dilated second foretarsal segment. As with many species of *Laccobius*, females can only certainly be determined by association with males. The pronotal spot pattern is variable, but may be of use in separating these species from other *Laccobius*. In Maine I have collected these species together and with *L. minutoides*. D'Orchymont (1942) included a figure of the male genitalia in his description of *L. minutoides*.

#### Acknowledgments

I thank the following individuals for the loan of specimens and for valuable advice: Mr. M. E. Bacchus (BMNH), Dr. David H. Kavanaugh (CAS), Dr. A. Smetana (CNC), Dr. David C. Miller (DCM), Mr. Eric H. Smith (FMNH), Dr. Saul Frommer (UCR), Dr. John Dimond (UM), Dr. Paul J. Spangler (USNM), Dr. Brian S. Cheary, and Mr. Ronald B. Willson. I am most grateful to Drs. James A. Slater, David C. Miller, and Paul J. Spangler for critical review of this manuscript. My sincere thanks also to the illustrators, Ms. Mary Jane Spring and Ms. Molly Hubbard.

#### Literature Cited

- D'Orchymont, A. 1942. Revision des *Laccobius* Américains (Coleoptera Hydrophilinae Hydrobiini). Bull. Mus. R. d'Hist. Nat. Belg. 18:13-18.

Malcolm, S. E. 1971. The Water Beetles of Maine: Including the Families Gyrinidae, Halplidae, Dytiscidae, Noteridae, and Hydrophilidae. Univ. Maine Agri. Exp. Sta. Tech. Bull. 48. 49 pp.

Biological Sciences Group, Box U-43, The University of Connecticut,  
Storrs, CT 06268.

Received for publication July 21, 1978.